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ABSTRACT

The Young Scholars' Program of the National Science Foundation is designed to stimulate and extend the interests in science and mathematics of students entering grades 7 through 12. An additional goal of the program is to encourage them to investigate and pursue careers in science, mathematics, engineering, and technology. The program strongly emphasizes student participation in the process of scientific discovery through interaction with practicing scientists in the laboratory and in the field. Projects offer a combination of instruction, research, and problem-solving activities along with opportunities to explore career options and confront issues of ethics in science. This directory lists the Young Scholars projects scheduled for 1997 that take place at sites throughout the United States. In addition to the summer activities, follow-up occurs during the academic year, often involving parents, other students, and teachers in the home schools. The entries in this directory are organized by the state of the sponsoring institution. Some projects draw participants from the immediate local vicinity, others accept applications state-wide, some are regional, and still others are national in scope. (JRH)

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ED 406 235

# DIRECTORY OF NSF-SUPPORTED YOUNG SCHOLARS PROJECTS

Summer 1997
Academic Year 1997-1998

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Division of Elementary, Secondary, and Informal Education
NATIONAL SCIENCE FOUNDATION 1997

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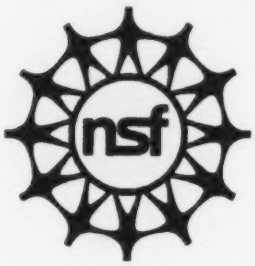
# DIRECTORY OF NSF-SUPPORTED YOUNG SCHOLARS PROJECTS

Summer 1997
Academic Year 1997-1998




Division of Elementary, Secondary, and Informal Education
NATIONAL SCIENCE FOUNDATION 1997

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## Introduction

The Young Scholars' Program of the National Science Foundation is designed to stimulate and extend the interests in science and mathematics of students entering grades seven through twelve. An additional goal of the program is to encourage them to investigate and pursue careers in science, mathematics, engineering, and technology.

The Program strongly emphasizes student participation in the process of scientific discovery through interaction with practicing scientists in the laboratory and the field. Projects offer a combination of instruction, research, and problem-solving activities along with opportunities to explore career options and confront issues of ethics in science. These projects focus on a variety of disciplines including mathematics, computer science, engineering, chemistry, life sciences, physics, and the earth sciences.

This directory lists the Young Scholars projects scheduled for 1997 that will take place at sites throughout the United States. In addition to the summer activities, follow-up occurs during the academic year, often involving parents, other students, and teachers in the home schools.

The entries in this directory are organized by the state of the sponsoring institution. Some projects draw participants from the immediate local vicinity, others accept applications state-wide, some are regional, and still others are national in scope. Please note that program dates and application deadlines vary, as do disciplinary and grade level emphases. Some projects may have additional admissions criteria which are not included in the directory. For such information, application forms, and other particulars, interested persons must contact the project directly. *NSF staff cannot provide this information.* In some cases vacancies develop or lists of alternates are maintained, so it may prove worthwhile to inquire even after the stated deadline.

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## ALABAMA

**University of Alabama Tuscaloosa**
*Statistics and Probability: Project SPY (Statistics, Probability, and You)*

**Award Number:** 9552942
**Project Location:** Tuscaloosa, AL
**Project Type:** Residential
**Dates:** 7/6/97-7/31/97
**Recruitment Area:** Tuscaloosa County
**Application Deadline:** 4/15/97
**Enrollment:** 24
**Eligibility/Qualifiers:** Entering Grade 8 or 9; High Ability/Potential in Mathematics
**Cost:** None
**Stipends:** None
**Discipline Focus:** Mathematics - Statistics and Probability

**Contact:** Cecelia Laurie and/or
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Box 870350
Tuscaloosa, AL 35487-0350
Phone: (205) 348-5071
E-Mail: claurie@ualvm.ua.edu
nfisher@gp.as.ua.edu
Fax: (205) 348-7067

**Description:**

This four-week project provides for the increased participation of young women in mathematics. The disciplinary focus is in statistics and probability; instructional activities are hands-on and experiential. Participants complete projects led by women scientists. Emphasis is placed on career awareness. Monthly follow-up occurs throughout the academic year.

## ARIZONA

**Arizona State University**
*A Mathematics and Computer Science Enhancement Project on the Navajo Reservation*

**Award Number:** 9553492
**Project Location:** Tempe, AZ
**Project Type:** Residential
**Recruitment Area:** Navajo Reservation
**Application Deadline:** 4/15/97
**Enrollment:** 60
**Eligibility/Qualifiers:** Entering Grade 8 or 9; Excellent Grades and High Interest in Mathematics and Science; Application; Recommendations
**Cost:** None
**Stipends:** $80
**Discipline Focus:** Mathematics; Computer Programming; Physical and Environmental Science

**Contact:** Dr. Tom Taylor
Department of Mathematics
Arizona State University
Tempe, AZ 85287-1804
Phone: (602) 965-3778 / 1690
E-Mail: tom.taylor@asu.edu
Fax: (602) 965-0333

**Description:**

Investigations in basic physics and astronomy will provide a platform to launch into the mathematical explorations. The project combines four weeks of instruction/exploration activities during the summer residential period with strong support during the academic year, including a class reunion at ASU. The summer program will take place at two sites, one of these is ASU, while the other is a location centrally located in the Navajo reservation. Eighth grade students will spend three weeks boarding in the dormitories in the reservation and one week at ASU, while ninth grade students will spend two weeks each at NCC and at ASU. During the reservation portion of the program, students will spend weekends at home. Parents will be encouraged to visit the students during the summer program and to attend field trips during the summer program as well as the follow up periods. Preference is given to attendees of Navajo Reservation Schools.

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## CALIFORNIA

**California State University Fresno Foundation**
*San Joaquin Young Scholars Mathematics Institute*

**Award Number:** 9553531
**Project Location:** Fresno, CA
**Project Type:** Commuter
**Dates:** 6/23/97-8/1/97
**Recruitment Area:** San Joaquin Valley
**Application Deadline:** 3/1/97
**Enrollment:** 25
**Eligibility/Qualifiers:** Entering Grade 12; Algebra I, II, and Geometry with Grade of B or Better; No Previous Participation in a Young Scholars Institute; Letters of Recommendation
**Cost:** None
**Stipends:** $100 per Week
**Discipline Focus:** Mathematics
**Contact:** Rudolph Najar
Department of Mathematics
California State University Fresno
Fresno, CA 93740-0108
Phone: (209) 278-2992
E-Mail: rudolphn@csufresno.edu
Fax: (209) 278-2872

**Description:**

The disciplinary focus of the program is in mathematics with an emphasis on combinatorics, graph theory, group theory, and number theory. Summer activities include seminars, a computer short course, field trips, discussions of mathematics careers and the ethics of science. Four one-day sessions during the school year follow-up the summer component.

**California State Los Angeles University Auxiliary Service**
*Young Scholars Modern Mathematics Program*

**Award Number:** 9553527
**Project Location:** Los Angeles, CA
**Project Type:** Commuter
**Dates:** 7/1/97-8/1/97; Academic Year Follow-Up
**Recruitment Area:** Greater LA Area
**Application Deadline:** 4/17/97
**Enrollment:** 50
**Eligibility/Qualifiers:** Entering Grades 9-12
**Cost:** None
**Stipends:** $350
**Discipline Focus:** Mathematics
**Contact:** Joseph Bragin
Mathematics & Computer Science
School of Natural & Social Sciences
California State University Los Angeles
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Phone: (213) 343-2540
E-Mail: jbragin@calstatela.edu
Fax: (213) 343-2011

**Description:**

This is a four and one-half week project in mathematics for highly motivated and underserved students. Students study mathematics with supplementary hands-on computer use. Additional experiences include research, lectures, and field trips. The academic year Saturday sessions on campus involve follow-up of summer activities, student presentations, and science fair participation.

**Los Angeles County Museum of Natural History**
*Museum Research Apprenticeship Program*

**Award Number:** 9552906
**Project Location:** Los Angeles, CA
**Project Type:** Commuter
**Recruitment Area:** Greater LA Area
**Application Deadline:** N/A
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 10 or 11; Strong Interest and Ability in Science
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Earth, Life, and Social Sciences

**Contact:** Karen Wise
Los Angeles County Museum of Natural History
Anthropology Section
900 Exposition Boulevard
Los Angeles, CA 90007
Phone: (213) 744-3381
E-Mail: wise@bcf.usc.edu
Fax: (213) 747-4114

**Description:**

This project focuses on museum-related disciplines, concentrating on southern California natural history. Students gain a solid background in the fundamentals of natural history and scientific research methods, and have a unique opportunity to work in a museum, from behind-the-scenes research to presentation of new results in the public areas of the museum. They leave the program with an understanding of the process of doing science, and better prepared to make informed decisions about their academic and professional careers.

**University of California Los Angeles**
*Young Scholars Program*

**Award Number:** 9552922
**Project Location:** Los Angeles, CA
**Project Type:** Commuter with 3-Day Residential Component
**Dates:** 7/7/97-8/15/97; Academic Year Follow-Up
**Recruitment Area:** Greater LA Area
**Application Deadline:** 5/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 10; High Potential/High Ability Students; Completed Geometry; Interest in Science Research
**Cost:** None
**Stipends:** $200
**Discipline Focus:** Mathematics; Introduction to Scientific Research

**Contact:** Stephen E. Jacobsen or
Rick Ainsworth
University of California
Los Angeles
School of Engineering & Applied Science
3137 Engineering I
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Los Angeles, CA 90095-1600
Phone: (310) 825-2942
(310) 206-6493
E-Mail: jacobsen@seas.ucla.edu
rique@ca.ucla.edu

**Description:**

This program features an intensive study of Fractals and its application to advanced topics in geometry and algebra. Students also engage in faculty guided research projects which provide a platform to investigate transportation technology. Project teams design and carry out lab-based experiments and utilize LEGO DACTA Computer Program to explore technological advancements. Faculty mentors discuss the scientific ethics associated with transportation and students learn about career options through field trips and panel discussions led by engineers and scientists in the field. Research teams conclude their work with a report and formal presentation to faculty, peers, and parents.

## COLORADO

**Colorado School of Mines**
*"At Risk" Middle School Young Scholars*

**Award Number:** 9553529
**Project Location:** Golden, CO
**Project Type:** Residential
**Dates:** 6/14/97-7/3/97
**Recruitment Area:** National
**Application Deadline:** 4/15/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 7 or 8
**Cost:** None
**Stipends:** $25 per Week
**Discipline Focus:** Mathematics; Computing

**Contact:** Ardel Boes
Colorado School of Mines
Dept. of Mathematics and Computer Sciences
1500 Illinois Street
Golden, CO 80401
Phone: (303) 273-3882
E-Mail: oscar@isabella.mines.colorado.edu

**Description:**

This three-week project is for at-risk middle school students. Emphasis is on mathematical problem solving and computing in a cooperative learning environment. LOGO is used in the computing class. Students complete a research project under the supervision of a mentor who is a professional at Bell Labs/Lucent Technologies. Career exploration is an integral part of the program.

## DISTRICT OF COLUMBIA

**Gallaudet University**
*Gallaudet Summer Science Program*

**Award Number:** 9552883
**Project Location:** Washington, DC
**Project Type:** Residential
**Recruitment Area:** National
**Application Deadline:** 5/1/97
**Enrollment:** 15
**Eligibility/Qualifiers:** Deaf or Hard-of-Hearing
**Cost:** $750
**Stipends:** Scholarships Available
**Discipline Focus:** Biology; Chemistry; Physics Perspectives on the Environment

**Contact:** Dr. Richard W. Meisegeier
Honors Program
Gallaudet University
800 Florida Avenue, NE
Washington, DC 20002-3695
Phone: (202) 651-5550
E-Mail:
rwmeisegeier@gallau.gallaudet.edu
Fax: (202) 651-5065

**Description:**

The Gallaudet Summer Science Program (SSP) is a four-week residential program for Deaf and hard-of-hearing high school students ages 14 to 16. Students are introduced to environmental studies from the perspectives of biology, chemistry, and physics. Students, under the supervision of a university professor, then select a research topic related to the environment and investigate their topic using one of these perspectives. The result of their research is published on the WWW. Evening and weekend activities are an integral part of SSP.

## FLORIDA

**Howard University**
*Early Exposure to Concepts of Microbiology*

**Award Number:** 9553518
**Project Location:** Washington, DC
**Project Type:** Life Sciences
**Recruitment Area:** Prince George's County, Maryland
**Application Deadline:** 3/30/97
**Enrollment:** 30 Gender-Paired Students
**Eligibility/Qualifiers:** Must have B+ Average
**Cost:** None
**Stipends:** $50 per Week
**Discipline Focus:** Microbiology
**Contact:** Dr. W. Lena Austin
Howard University
Dept. of Microbiology
College of Medicine
520 W Street, N.W.
Washington, DC 20059
Phone: (202) 806-4669
Fax: (202) 806-4508

**Description:**

This four-week project with academic year follow-up introduces students to concepts and techniques used in microbiology. Students are exposed to laboratory procedures such as gram staining, brightfield microscopy, and techniques in molecular biology. Individual faculty conduct mini-research projects with students in order to stimulate and promote their interest in microbiology and the life sciences. Students have the opportunity to talk one on one with physicians, medical technicians, and research scientists concerning the integration of microbiology in their career fields. In addition, students participate in a number of learning experiences during the summer and academic year. These include trips to research facilities and national museums.

**Florida A&M University**
*Mathematical Models in the Natural and Social Sciences*

**Award Number:** 9552944
**Project Location:** Tallahassee, FL
**Project Type:** Residential
**Dates:** 6/97-8/97
**Recruitment Area:** Florida
**Application Deadline:** 4/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grades 9-11; High Potential as Scientist
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Mathematics; Multidisciplinary Science
**Contact:** Roselyn Williams
Florida A&M University
Department of Mathemtics
Tallahassee, FL 32307
Phone: (904) 599-3595
E-Mail: williams@math.fsu.edu
Fax: (904) 599-9480

**Description:**

This project focuses on introducing promising students whose cultural group is underrepresented in the sciences, to careers in science, engineering, and mathematics. Each student develops a project and completes a research paper. Five participants from year one of the project are invited to return in year two as program assistants.

**Florida State University**
*Florida State University Summer Science and Mathematics Camp for Students and Teachers*

**Award Number:** 9552911
**Project Location:** Tallahassee, FL
**Project Type:** Residential
**Recruitment Area:** Florida
**Application Deadline:** 3/15/97
**Enrollment:** 36 Students; 5 Teachers
**Eligibility/Qualifiers:** Entering Grade 11 or 12; B Average; 90th Percentile in Math; Standardized Test
**Cost:** ~$100 for Books; Personal Expenses
**Stipends:** None
**Discipline Focus:** Multidisciplinary Science

**Contact:** D. Ellen Granger
Florida State University
Department of Biological Sciences
Tallahassee, FL 32306-2043
Phone: (904) 644-6747
E-Mail: granger@bio.fsu.edu
Fax: (904) 644-0643

**Description:**

This program consists of an individual research project which each student completes with a faculty mentor that is matched to their science interest. Students also complete required coursework in mathematics and computer science with electives in biology/biochemistry or physics. Required seminars in science ethics and career exploration and weekend field trips complete the student program. Teachers also complete individual research projects, science elective and pedagogy courses, and the career exploration seminar.

**University of South Florida**
*Florida Education in Geology and Ecology (FLEDGE-ling): An Inquiry-based Science Enrichment Program for Middle School Girls*

**Award Number:** 9552939
**Project Location:** Tampa, FL
**Project Type:** Commuter
**Dates:** 6/16/96-7/11/97
**Recruitment Area:** Hillsborough County
**Application Deadline:** 4/97
**Enrollment:** 48 Students
**Eligibility/Qualifiers:** Entering Grade 7 or 8; Recommendation of Teacher or Principal; Interview
**Cost:** None
**Stipends:** None
**Discipline Focus:** Earth Science; Life Science

**Contact:** Eleanour Snow
University of South Florida
Department of Geology
4202 E. Fowler Avenue
SCA 203
Tampa, FL 33620
Phone: (813) 974-0319
E-Mail: snow@chuma.cas.usf.edu
Fax: (813) 974-2654

**Description:**

The disciplinary focus of this project is on earth and life sciences with an emphasis on how plants, animals, water, and soil interact in three diverse Florida ecosystems: coastal/estuary, freshwater wetland, and upland/sandhill. Students develop questions and, with guidance, gather and analyze data to answer their questions. Field trips focus on environmental policy and ethics, while faculty and guest leaders emphasize career options and build participants scientific interest, knowledge, and self-confidence. Preference is given to young women.

**University of South Florida**
*Oceanography Camp for Girls*

**Award Number:** 9552898
**Project Location:** Saint Petersburg, FL
**Project Type:** Commuter
**Dates:** 6/97-7/97
**Recruitment Area:** Pinellas County, FL
**Application Deadline:** 4/30/97
**Enrollment:** 30 Students; 6 Middle School Teachers
**Eligibility/Qualifiers:** Entering Grade 8 or 9
**Cost:** None
**Stipends:** None
**Discipline Focus:** Biology; Chemistry; Geology; Physics; Mathematics; Computer Science

**Contact:** Teresa Greely
University of South Florida
Department of Marine Science
140 Seventh Avenue South
St. Petersburg, FL 33701-5016
Phone: (813) 553-3921
E-Mail: greely@marine.usf.edu
Fax: (813) 553-3966

**Description:**

This three week project is directed towards motivating young women to pursue studies and careers in science by encouraging their desire to understand the natural world around them. This is facilitated not only by hands-on experiments, research cruises, and in-depth laboratory explorations, but by direct mentoring of female faculty and graduate students who are involved in scientific research themselves, and thus serve as role models. The project also provides middle school teachers with a five-week research and learning opportunity.

## GEORGIA

**Atlanta Metropolitan College**
*Science and Mathematics are Right Together (SMART)*

**Award Number:** 9553538
**Project Location:** Atlanta, GA
**Project Type:** Commuter
**Dates:** 6/16/97-7/18/97; Academic Year Follow-Up
**Recruitment Area:** Greater Atlanta
**Application Deadline:** 3/31/97
**Enrollment:** 36
**Eligibility/Qualifiers:** Entering Grade 7 or 8; B Average or Better in Mathematics and Science; Letter of Desire; On Track for Algebra in 8th Grade; Recommendation from Teacher or Counselor
**Cost:** None
**Stipends:** $125; Meals; Transportation
**Discipline Focus:** Mathematics; Chemistry

**Contact:** John Morrell
Natural Science and Mathematics Division
Atlanta Metropolitan College
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Atlanta, GA 30310
Phone: (404) 756-4028
E-Mail:
morrellj@amcmail.atlm.peachnet.edu
Fax: (404) 756-5685/4460

**Description:**

Project SMART is a five-week commuter program which is designed to cultivate a sense of wonder, intrigue and challenge, and channel energies toward mathematics and the sciences. Project activities include laboratory and field experiments arising from an investigation of the chemistry of the environment, and an investigation into the mathematics arising from these experiments. The program is designed for the student who is interested in exploring what causes things to: *STINK, SHRINK, GROW, and GO.* Investigations into acid rain, waste management, and electrochemistry will provide the mathematical models for this program.

**Clark Atlanta University**
*Clark Atlanta University Young Scholars Program*

**Award Number:** 9452734
**Project Location:** Atlanta, GA
**Project Type:** Commuter and Residential
**Dates:** 6/15/97-7/25/97
**Recruitment Area:** Southeast Region of U.S.
**Application Deadline:** 5/3/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grades 8-12; GPA of 3.25; Appropriate Courses in Mathematics and Science
**Cost:** None
**Stipends:** Full Financial Aid Available
**Discipline Focus:** Interdisciplinary Science

**Contact:** Melvin Webb
Clark Atlanta University
Department of Biological Sciences
Atlanta, GA 30314
Phone: (404) 880-6868
E-Mail: mwebb.cau.edu
Fax: (404) 880-6842

**Description:**

The project focuses on science, engineering, and mathematics course work and research in the laboratory with university scientists serving as mentors. Additional activities include career seminars, discussions on the philosophy and ethics of science, career counseling, and field trips.

**Kennesaw State College**
*KSC Young Scholars Project in Environmental Toxicology*

**Award Number:** 9552934
**Project Location:** Kennesaw, GA
**Project Type:** Commuter
**Dates:** 6/15/97-7/25/97
**Recruitment Area:** Cobb County
**Application Deadline:** 4/15/97
**Enrollment:** 24
**Eligibility/Qualifiers:** Entering Grade 11 or 12; Science and Mathematics Grades of B or Better; Science Interests; Commitment to All Program Activities
**Cost:** None
**Stipends:** $300
**Discipline Focus:** Biology; Chemistry; Biochemistry

**Contact:** Army Lester
Kennesaw State University
1000 Chastain Road
Kennesaw, GA 30144-5591
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E-Mail: alester@kscmail.kennesaw.edu
Fax: (770) 423-6625

**Description:**

This six-week project in interdisciplinary science (biology, chemistry, and biochemistry) provides students with academically enriching activities. Exciting research experiences are designed to lead participants to a better understanding of the career options in science, mathematics, and engineering, and the preparation necessary to be successful in achieving these careers. The activities include classroom lectures and discussions, field trips, seminars, and lab/research activities to build academic strength.

## HAWAII

**University of Hawaii at Manoa**
*NSF Young Scholars Pacific Region Program*

**Award Number:** 9553520
**Project Location:** Honolulu, HI
**Project Type:** Residential
**Dates:** 4/1/97-8/31/97
**Recruitment Area:** Hawaii and American-Pacific Islands
**Application Deadline:** 3/15/97
**Enrollment:** 26
**Eligibility/Qualifiers:** PSAT or SAT Scores; GPA; Recommendation Letters; Essay
**Cost:** None
**Stipends:** None
**Discipline Focus:** Science with Focus on Agricultural Sciences

**Contact:** Dr. Sylvia Yuen
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Fax: (808) 956-3706

**Description:**

The program consists of four interrelated components: classroom presentations; fieldtrips; research with mentors; and small group activities. Students conduct research projects under the guidance of CTAHR scientists, learn how science is used to solve real-world problems, and increase their understanding of the ethics and career opportunities in science. They live in college dormitories on the UH-Manoa campus for the six weeks of the program. Students considered from this program are those who are motivated, mature, and interested in mathematics, science, and/or agriculture.

## ILLINOIS

**Center For American Archeology**
*Archeology and the Natural Sciences*

**Award Number:** 9552910
**Project Location:** Kampsville, IL
**Project Type:** Residential
**Dates:** 7/7/97-8/15/97
**Recruitment Area:** National with Regional Emphasis
**Application Deadline:** 4/1/97
**Enrollment:** 34
**Eligibility/Qualifiers:** Entering Grades 10-12
**Cost:** None or Room & Board
**Stipends:** $50 per Week
**Discipline Focus:** Archeology

**Contact:** Harry Murphy
NSF-YS Program
Center for American Archeology
P.O. Box 366
Kampsville, IL 62053-0366
Phone: (618) 653-4316
E-Mail: CAAEDP@AOL.COM
Fax: (618) 653-4232

**Description:**

The disciplinary focus of this project is in archeological research with an emphasis on the role that geomorphology, botany, zoology, bioanthropology, and other disciplines play in understanding past societies. Students spend six weeks in residency. The first three weeks are directed at excavating a prehistoric Native American site. The second three weeks students conduct individual research projects under the guidance of an archeologist as a mentor. Activities introduce the students to ethical issues, career choices, and computer applications in archeology, scientific theory, and methodology.

**Loyola University of Chicago**
*The NSF/Loyola University Young Scholars Project*

**Award Number:** 9553539
**Project Location:** Chicago, IL
**Project Type:** Commuter
**Dates:** 5/15/97-9/30/97; Academic Year Follow-Up
**Recruitment Area:** Chicago
**Application Deadline:** 5/1/97
**Enrollment:** 18
**Eligibility/Qualifiers:** Entering Grade 11 or 12; Upper 25% of Class
**Cost:** None
**Stipends:** $300
**Discipline Focus:** Computer Science; Mathematics; Physics

**Contact:** Christine Haught
Loyola University of Chicago
Mathematical Sciences
6525 North Sheridan
Chicago, IL 60611
Phone: (312) 508-3558
E-Mail: cah@math.luc.edu
Fax: (312) 508-2123

**Description:**

This is a six week commuter program with academic year follow-up. The subject matter encompasses mathematics, computer science, and physics. The students will learn about basic computer architecture and will perform labs in a digital electronic laboratory with a research physicist. Each student will assemble a computer from components which she/he then keeps upon completion of the program. They will learn introductory programming in C++. This will be a mathematics-based program; students will explore mathematical concepts using the computer as a tool. Students will also learn about and explore the WWW. Another important component of the program consists of career-oriented field trips. There will be an 8-month academic year follow-up to the summer program. Students will meet at Loyola's Lakeshore campus one Saturday each month to continue their study of computer science and mathematics. The program will also have a social and recreational component designed to foster a feeling of community among the participants and their instructors.

**Southern Illinois University Edwardsville**
*At Risk Scientists Pipeline Building Via Young Scholars*

**Award Number:** 9552907
**Project Location:** Edwardsville, IL
**Project Type:** Residential
**Dates:** 6/8/97-7/11/97
**Recruitment Area:** Metro St. Louis
**Application Deadline:** 5/1/97
**Enrollment:** 50
**Eligibility/Qualifiers:** Entering Grades 9-11
**Cost:** None
**Stipends:** None
**Discipline Focus:** Chemistry; Biology

**Contact:** Emil Jason
Southern Illinois University Edwardsville
Department of Chemistry
College of Arts & Sciences
Edwardsville, IL 62026
Phone: (618) 692-2042
Fax: (618) 692-3556

**Description:**

This five-week project combines classroom instruction in mathematics, chemistry, biology, language arts, ethics and career exploration with field trips, laboratory study, and research to provide an intellectually stimulating environment. Scientists from the university serve as role models and mentors in assisting students in their research experience.

## INDIANA

**Indiana University Bloomington**
*Exploration of Careers in Science*

**Award Number:** 9553534
**Project Location:** Bloomington, IN
**Project Type:** Residential
**Dates:** 6/15/97-8/9/97
**Recruitment Area:** Indiana
**Application Deadline:** 3/31/97
**Enrollment:** 50
**Eligibility/Qualifiers:** Entering Grade 11 or 12; 1 Year Biology and Algebra; 1 Year Physical Science Preferred
**Cost:** None
**Stipends:** Stipends
**Discipline Focus:** Interdisciplinary
**Contact:** Dennis Peters
Indiana University Bloomington
Department of Chemistry
College of Arts and Sciences
Chemistry A612
Bloomington, IN 47405
Phone: (812) 855-9671
E-Mail: PETERS@IUBACS
Fax: (812) 855-8300

**Description:**

Indiana University provides an introduction to the disciplines of Astronomy, Biology, chemistry, Computer Science, Geology, Mathematics, Physics, and Psychology. During the first two weeks of the program, participants will have the opportunity to learn about research methodology and to explore career options in science and mathematics through a series of lectures, field trips, and hands-on experiences. During the last six weeks of the program, students will work as apprentice scientists on specially designed research projects under the auspices of University faculty members. Throughout the institute, emphasis will be placed on philosophy and ethics of science, careers in science and mathematics, and the interrelationships of all the science areas.

**Purdue University**
*PAGES: Purdue Agricultural and Environmental Science*

**Award Number:** 9552889
**Project Location:** West Lafayette, IN
**Project Type:** Residential
**Recruitment Area:** IN, IL, MI
**Application Deadline:** 3/1/97
**Enrollment:** 25
**Eligibility/Qualifiers:** Entering Grade 11 or 12; Strong Academic Record; Interest in Pursuing a Career in Agricultural Science
**Cost:** None
**Stipends:** $700
**Discipline Focus:** Agricultural and Biological Engineering; Agronomy; Animal Sciences; Biochemistry; Botany and Plant Pathology; Entomology; Food Sciences; Forestry and Natural Resources; Horticulture
**Contact:** Christian Oseto
Dept. of Entomology
Purdue University
W. Lafayette, IN 47907-1158
Phone: (317) 494-4554
E-Mail: chris_oseto@entm.purdue.edu
Fax: (317) 494-0535

**Description:**

PAGES is a seven-week residential program for qualified high school students who will participate in a challenging research and academic program. Each Young Scholar will conduct research under the guidance and direction of an outstanding research scientist. During the program, Young Scholars will attend lectures, informal discussions, workshops, and extramural activities designed to provide a well-rounded educational experience. Young Scholars will increase their awareness of the career opportunities within the global food, agriculture, and natural resources system and will broaden the students appreciation of the scientific challenges offered by the modern agriculture and natural resources disciplines. At the conclusion of the program, Young Scholars will write a research paper, give a ten-minute oral presentation, and develop a poster of their research project.

## KANSAS

**Pittsburg State University**
*STARS: Student Training Academy for Research in Science*

**Award Number:** 9552896
**Project Location:** Pittsburg, KS
**Project Type:** Residential
**Dates:** 6/15/97-7/3/97
**Recruitment Area:** 100 Mile Radius
**Application Deadline:** 4/14/97
**Enrollment:** 36
**Eligibility/Qualifiers:** Entering Grade 8 or 9
**Cost:** None
**Stipends:** None
**Discipline Focus:** Biology; Chemistry
**Contact:** Peter Hamlet
Department of Chemistry
Pittsburg State University
Pittsburg, KS 66762
Phone: (316) 235-4752
E-Mail: phamlet@pittstate.edu
Fax: (316) 235-4194

**Description:**

Participants will learn to do laboratory or field research by working on a research project with a professor of biology or chemistry and attending classes on research methods.

## KENTUCKY

**University of Kentucky Research Foundation**
*Engineering Ahead!*

**Award Number:** 9553524
**Project Location:** Lexington, KY
**Project Type:** Residential
**Recruitment Area:** Regional (KY, WV, OH, TN, IN, VA)
**Application Deadline:** 4/15/97
**Enrollment:** 29
**Eligibility/Qualifiers:** Entering Grade 12; Completed Algebra II; Geometry; Chemistry
**Cost:** None
**Stipends:** None
**Discipline Focus:** Engineering
**Contact:** Shien T. (Jim) Wang
Department of Civil Engineering
University of Kentucky
Lexington, KY 40506
Phone: (606) 257-4916
E-Mail: CEG122@UKCC.UKY.EDU
Fax: (606) 257-4404

**Description:**

Computer Laboratory Experiences; Sessions in Basic Engineering Principles; Introduction to Engineering Disciplines; Field Trips to Industry; A Day of Shadowing an Engineer; Workshops in Professional Ethics, Career Decision-Making, Communication Skills, and College Admissions/Scholarship/Financial Aid Information; Mini Research Projects; and an independent project to be completed in the students' home communities.

## MARYLAND

**College of Notre Dame**
*SANDALS - TEAMS: Summer at Notre Dame: Academic and Leadership Skills--Technology, Engineering and Mathematics, Science*

**Award Number:** 9553498
**Project Location:** Baltimore, MD
**Project Type:** Residential
**Dates:** 6/23/97-8/10/97
**Recruitment Area:** Metro Baltimore
**Application Deadline:** 3/17/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 12; Interest in Science / Related Career; Sound Academic Record; Teacher Recommendation
**Cost:** None
**Stipends:** $90 per Week
**Discipline Focus:** Chemistry; Biology; Mathematics; Computers

**Contact:** Dr. Alfred D'Agostino
College of Notre Dame
Department of Chemistry
4701 North Charles Street
Baltimore, MD 21210-2476
Phone: (410) 532-5148
Fax: (410) 532-5799

**Description:**

This project is designed to engage students in a rigorous laboratory-based program in biochemistry, biotechnology, microbiology, chemistry, mathematics, history, and ethics of science. Four weeks of the program focus on academic and problem-solving pursuits. During the remaining weeks, students participate in an Intern Program. Preference is given to underrepresented students.

**Prince George's Community College**
*The Young Scholars Field Research Institute*

**Award Number:** 9553500
**Project Location:** Largo, MD
**Project Type:** Commuter
**Dates:** 6/16/97-7/11/97; Academic Year Follow-Up
**Recruitment Area:** Metro DC-Baltimore
**Application Deadline:** 4/1/97
**Enrollment:** 24
**Eligibility/Qualifiers:** Entering Grades 10-12; Letter of Recommendation from Principal or Science Teacher; PSAT/SAT Scores; Science and Mathematics Grades; Essay
**Cost:** None
**Stipends:** $400
**Discipline Focus:** Field Research in Ornithology; Water Ecology; Horticulture

**Contact:** Janet McMillen
Prince George's Community College
Dept. of Physical Sciences
M-2011
301 Largo Rd.
Largo, MD 20774-2199
Phone: (301) 322-0435
E-Mail: jm3@pgstumail.pg.cc.md.us
Fax: (301) 336-2851

**Description:**

Students will spend the first two weeks of this program at the college. In week 3, they will be at the research sites: the Chesapeake Biological Laboratory, Solomon's, MD; the Patuxent Wildlife Research Center, Laurel, MD; the Patuxent River Park, Jug Bay, MD; and the University of Maryland at College Park, MD. Students will collect data on endangered cranes osprey, Patuxent River water, and UMCP horticulture studies. Students will also use Internet data sets, learn geographic information software and analyze data by GIS, and develop a research presentation. Follow-up activities include field trips to Bombay Hook, DE, to study migrating tropical birds, presentations at research conferences, and a field trip to the eastern shore of Maryland to study wintering waterfowl.

**University of Maryland Baltimore County**
*Horizons Exploration Program*

**Award Number:** 9552888
**Project Location:** Baltimore, MD
**Project Type:** Residential
**Dates:** 6/23/97-8/3/97; Academic Year Follow Up
**Recruitment Area:** Baltimore City Public Schools
**Application Deadline:** 4/30/97
**Enrollment:** 50
**Eligibility/Qualifiers:** Entering Grade 9; Academic Average 85 or Above
**Cost:** None
**Stipends:** None
**Discipline Focus:** Biology; Chemistry; Mathematics

**Contact:** Brian Bradley and Donald Hoes
University of Maryland Baltimore County
Upward Bound Math / Science Center
1000 Hilltop Circle
M/P Room 006-A
Baltimore, MD 21250
Phone: (410) 455-3677
Fax: (410) 455-1183

**Description:**

Students interested in this program must indicate an interest in preparing for a career in either mathematics or a science discipline. The emphasis during the program is on conducting a research project in either biology or chemistry. An attempt is made to offer students an integrated program/curricula that combines biology, chemistry, computer science, technical writing, science ethics, and mathematics. The work in each discipline is organized to support the student's research project. When the students complete their research projects they are encouraged to work as a member of a small team. Each team has a mentor from either the biology or chemistry discipline. Near the end of the summer program the student teams report orally to the faculty, other students, and parents on their work using the graduate school format. Visits to sites where scientists and other professionals work are designed to help students see the connections between the laboratory and the real world application of science, as well as to help them get more focused concerning a science career.

**University of Maryland College Park**
*Young Scholars Program at the Institute for Systems Research*

**Award Number:** 9552892
**Project Location:** College Park, MD
**Project Type:** Commuter
**Dates:** 7/97-8/97; Academic Year Follow-Up
**Recruitment Area:** National
**Application Deadline:** 3/15/97
**Enrollment:** 25
**Eligibility/Qualifiers:** Mathematics; Physics; Chemistry; PSAT/SAT; Statement of Objectives; Recommendations
**Cost:** None
**Stipends:** $500
**Discipline Focus:** Engineering

**Contact:** Mattie Riley
Institute for Systems Research
A.V. Williams Building (115)
University of Maryland College Park
College Park, MD 20742
Phone: (301) 405-6608
E-Mail: mattie@isr.umd.edu
Fax: (301) 314-9920

**Description:**

This is a six-week, summer commuter, Young Scholars Program in engineering at the University of Maryland's Institute for Systems Research for 25 students entering grade 12. By providing a balanced exposure to class, laboratory, and field activities, the goal is to introduce Young Scholars to a cross-disciplinary spectrum of engineering and scientific fields. First-hand experiences in research and design will be provided to encourage students to pursue advanced education in engineering and science and to discover the vast career opportunities in these fields.

## MASSACHUSETTS

**Brandeis University**
*Brandeis Summer Odyssey Young Scholars Project*

**Award Number:** 9552935
**Project Location:** Waltham, MA
**Project Type:** Residential
**Recruitment Area:** National
**Application Deadline:** 4/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grades 10 - 12
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Mathematics; Computer Science; Psychology; Environmental Science; Biotechnology

**Contact:** John F. Wardle
Brandeis University
Sydeman 4-D, Mailstop 084
Waltham, MA 02254-9110
Phone: (617) 736-2889
E-Mail: wardle1@binah.cc.brandeis.edu
Fax: (617) 736-2915

**Description:**

This project is designed to encourage High School students to pursue science by placing them in Directed Research projects that enhance their laboratory and technical skills.

**MIT**
*Haystack Young Scholars Program -- Early Alert*

**Award Number:** 9555844
**Project Location:** Westford, MA
**Project Type:** Commuter; Academic Year Follow-Up
**Recruitment Area:** 15 Mile Radius
**Application Deadline:** 4/1/97
**Enrollment:** 55 - 60
**Eligibility/Qualifiers:** Entering Grade 8 or 9
**Cost:** None
**Stipends:** None
**Discipline Focus:** Astronomy; Physics; Mathematics

**Contact:** Dr. Joseph E. Salah
MIT Haystack Observatory
Route 40
Westford, MA 01886
Phone: (508) 692-4764
E-Mail: jes@newton.haystack.edu
Fax: (617) 981-0590

**Description:**

Exposure to multi-disciplinary research in astronomy and geophysics, utilizing instrumentation and special experiments designed to study the Earth's environment, it's crustal structure, and the Universe.

## MICHIGAN

**Wayne State University**
*Students' Opportunities in Science (SOS)*

**Award Number:** 9553511
**Project Location:** Detroit, MI
**Project Type:** Commuter
**Dates:** 6/23/97-7/18/97; Academic Year Follow-Up
**Recruitment Area:** Local
**Application Deadline:** 4/20/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 7
**Cost:** None
**Stipends:** $15 per Week; Travel
**Discipline Focus:** Mathematics; Computers; Physics

**Contact:** Joella Gipson
Wayne State University
College of Education
5425 Gullen Mall, Room 361
Detroit, MI 48202
Phone: (313) 577-1691
E-Mail: jgipson@coe.wayne.edu
Fax: (519) 945-7236

**Description:**

Intensive instruction in mathematics and physics focusing on experiential learning activities in small groups. Computers used in mathematics and physics problem solving. Career information provided continuously to all participants. Follow-up visitations during school year to students' schools to interact with students' teachers and other non-participant students. Students give oral presentations on their research experiences at the home school. Field trips to WSU women scientists laboratories, hands-on museums, and industrial sites. Involvement of parents, teachers, local women scientists and engineers, and business. Preference is given to female students.

## MISSISSIPPI

**Jackson State University**
*A Series of Mathematics for Everyone Workshops*

**Award Number:** 9552929
**Project Location:** Jackson, MS
**Project Type:** Residential
**Dates:** 7/7/97-7/27/97; Academic Year Follow-up
**Recruitment Area:** 70 Mile Radius of JSU
**Application Deadline:** 4/11/97
**Enrollment:** 38
**Eligibility/Qualifiers:** Entering Grades 7-9
**Cost:** None
**Stipends:** $15 per Week
**Discipline Focus:** Mathematics

**Contact:** Edna Holbrook
Jackson State University
Department of Mathematics
Jackson, MS 39217
Phone: (601) 973-3759
Fax: (601) 968-2718

**Description:**

The 3-week summer workshop portion and subsequent one-day-a-month academic year follow-up workshops are designed to teach mathematical concepts while showing that mathematics is a subject of enjoyment, excitement, and challenge for everyone. Learning activities include experiments, math-fair-type projects, field trips, and interaction with working mathematicians and mathematics majors. In follow-up workshops, junior high school participants will examine such areas of mathematics as topology, abstract algebra, and number theory.

**Jackson State University**
*The Excitement of Meteorology For Young Scholars*

**Award Number:** 9696039
**Project Location:** Jackson, MS
**Project Type:** Residential
**Recruitment Area:** Southern U.S.; National
**Application Deadline:** 4/10/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 11 or 12; Maximum of 2 Students From One High School
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Meteorology
**Contact:** Paul J. Croft
Jackson State University
Department of Physics and Atmospheric Sciences
P.O. Box 17660
1400 Lunch Street
Jackson, MS 39217-7012
Phone: (601) 968-7012
E-Mail: pcroft@stallion.jsums.edu
Fax: (601) 968-8623

**Description:**

This project is designed to help students develop basic skills in the field of meteorology and to make them aware of the interdisciplinary nature of meteorology and the career opportunities available. The students are involved in a combination of lectures, laboratory exercises, field trips, and a research project. The program offers a rare opportunity to draw upon and experience many different and varied scientific principles.

## MISSOURI

**Harris Stowe State College**
*Young Scholars Program in Mathematics and Physics*

**Award Number:** 9553496
**Project Location:** St. Louis, MO
**Project Type:** Commuter
**Recruitment Area:** Metro St. Louis
**Application Deadline:** 4/30/97
**Enrollment:** 32
**Eligibility/Qualifiers:** Entering Grade 8 or 9
**Cost:** None
**Stipends:** $13 per Day
**Discipline Focus:** Mathematics; Physics; Robotics
**Contact:** Dr. Lateef A. Adelani
Department of Math/Science
Harris Stowe State College
3026 Laclede Avenue
St. Louis, MO 63103
Phone:. (314) 340-3318
E-Mail: adelaniL@mail1.hssc.edu
Fax: (314) 340-3398

**Description:**

This is a five-week program for students currently enrolled in the 7th and 8th grades who are interested in pursuing a career in mathematics or related fields. The program focuses on the development of problem solving skills in mathematics, physics, robotics, and communication. The program also includes field trips to places such as McDonnell Douglas, St. Louis Science Center, and Six Flags, where participants can observe applications of mathematics and physics. Preference is given to minority students.

**University of Missouri Rolla**
*Young Scholars Program: Jackling Institute/Jackling-2*

**Award Number:** 9553525
**Project Location:** Rolla, MO
**Project Type:** Residential
**Dates:** 6/8/97-6/12/97; 6/15/97-6/19/97; 6/22/97-6/26/97; 7/27/97-8/15/97
**Recruitment Area:** National
**Application Deadline:** 4/4/97
**Enrollment:** 40 Per Session; 20 Last Session
**Eligibility/Qualifiers:** Entering Grade 12; Academic Ability and Credentials; Career Interest; Recommendation from Teacher or Counselor
**Cost:** $95
**Stipends:** $85 per Week in Last Session
**Discipline Focus:** Multidisciplinary Science; Engineering

**Contact:** Ronald Kohser
c/o Dean's Office
School of Mines & Metallurgy
305 McNutt Hall
University of Missouri Rolla
Rolla, MO 65409
Phone: (573) 341-4734
E-Mail: rkohser@umr.edu
Fax: (573) 341-4192

**Description:**

Exposes students to careers in minerals, materials, energy and environmental engineering, and science (geology, geophysics, geological engineering, petroleum engineering, mining engineering, ceramic engineering, metallurgical engineering, and nuclear engineering). Classroom presentations, demonstrations, laboratory experiences, and a 1-day field trip. An optional research experience is offered.

**University of Missouri Saint Louis**
*Scholar Research Program*

**Award Number:** 9553507
**Project Location:** St. Louis, MO
**Project Type:** Commuter
**Dates:** 6/23/97-8/1/97
**Recruitment Area:** Metro St. Louis and 60 Mile Radius
**Application Deadline:** 3/17/97
**Enrollment:** 50
**Eligibility/Qualifiers:** Entering Grade 12, Upper 5% of Class
**Cost:** None
**Stipends:** None
**Discipline Focus:** Multidisciplinary Science; Engineering; Mathematics

**Contact:** Charles R. Granger
University of Missouri
Saint Louis
Department of Biology
8001 Natural Bridge Road
St. Louis, MO 63121-4499
Phone: (314) 516-6226
E-Mail: granger@umsl.edu
Fax: (314) 516-6233

**Description:**

This is a research based project in anthropology, astronomy, biology, chemistry, computer science, mathematics, physics, psychology, and engineering High ability high school students will have the opportunity to do research projects under the supervision of a faculty mentor. Participants apply various problem solving strategies to their independent projects, write technical reports, and orally present their results. Formal instruction on technical communication skills is provided. Career confabs and industrial field trips expose students to a variety of job possibilities. Follow-up meetings occur during the academic year to increase awareness and help students continue independent research projects in their high school setting.

## NEW HAMPSHIRE

**University of New Hampshire**
*Mathematics and Marine Science Program*

**Award Number:** 9552943
**Project Location:** Durham, NH
**Project Type:** Residential
**Dates:** 6/30/97-7/19/97; Academic Year Follow-up
**Recruitment Area:** NH, ME
**Application Deadline:** 4/11/97
**Enrollment:** 25
**Eligibility/Qualifiers:** Algebra I and Earth Science or Biology; Grade B or Higher
**Cost:** $75 (Fee waived in case of economic hardship)
**Stipends:** None
**Discipline Focus:** Marine Science; Mathematics; Computer Technology

**Contact:** B. Sharon Meeker
Sea Grant Extension
Kingman Farm
University of New Hampshire
Durham, NH 03824
Phone: (603) 749-1575
E-Mail: bsm@christa.unh.edu
Fax: (603) 743-3997

**Description:**

The University of New Hampshire's Mathematics and Marine Science Program (M&M Program) involves 25 talented 9th graders from New Hampshire and Maine in a three-week summer residential program. The program integrates the study of statistics and computer technology within a marine science experience that includes lecture, field study, and laboratory experiences. The New Hampshire coast, the Great Bay estuary and the nearby Isles of Shoals are utilized as field locations for the program. Students will gain an understanding and appreciation of scientific research techniques and ethics, learn to incorporate mathematics concepts with field studies and do analysis of data using several different computer statistical programs. They will then use decisions derived from statistical tests of data to develop conclusions for self-posed biological questions. The students learn to work as productive members of research teams, applying creative problem-solving techniques as a part of the group process. Four Saturday workshops (one of which is introductory during the academic year), one Math and Marine Science Day, and six to eight career oriented colloquia during the summer will widen participant contact with a variety of science-related areas and career opportunities.

## NEW JERSEY

**Rutgers University**
*Waksman Student Scholars Program*

**Award Number:** 9552932
**Project Location:** Piscataway, NJ
**Project Type:** Residential
**Dates:** 7/7/97-8/1/97
**Recruitment Area:** New Jersey
**Application Deadline:** 4/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grades 10-12; 1 Year High School Biology; Recommendation from Science Teacher
**Cost:** None
**Stipends:** $200
**Discipline Focus:** Biological Sciences; Molecular Biology

**Contact:** Susan Coletta
CMSCE - SERC Bldg. Rm. 239
Busch Campus
Piscataway, NJ 08855-1179
Phone: (908) 445-3531
E-Mail: coletta@mbe1.rutgers.edu
Fax: (908) 445-3477

**Description:**

This program provides students with opportunities to work on a biological sciences research project that is intellectually challenging and one that is not ordinarily a part of the school curriculum. Students are involved in an authentic, ongoing investigation in molecular biology while they participate in conducting research that is under current study by the scientific community. Additional experiences include structured field trips, science seminars and discussions, integrated use of computer technologies, and hands-on laboratory investigations. A unique feature of the Waksman Student Scholars Program is the sustained academic year involvement of students, teachers, scientists, and project associates.

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**Rutgers University**
*Rutgers Young Scholars Program in Discrete Mathematics*

**Award Number:** 9553509
**Project Location:** New Brunswick, NJ
**Project Type:** Residential
**Recruitment Area:** New Jersey
**Application Deadline:** 5/1/97
**Enrollment:** 45
**Eligibility/Qualifiers:** Entering Grades 10-12
**Cost:** $850
**Stipends:** Available
**Discipline Focus:** Discrete Mathematics
**Contact:** Lisa Estler
CMSCE
P.O. Box 10867
New Brunswick, NJ 08906
Phone: (908) 445-4065
E-Mail: estler@dimacs.rutgers.edu
Fax: (908) 445-3477

**Description:**

This project introduces students to discrete mathematics, an accessible field with many applications and many open problems; increases students' problem solving ability; exposes them to mathematical scientists as role models; and encourages them to consider careers in mathematics and the sciences. Workshops conducted by college faculty focus on applications of graphs, algorithms in graph theory, iteration and fractals, and applications. A variety of technology environments are used for explorations and demonstrations related to these topics. Research projects are mentored by university and industry mathematicians and computer scientists. The program includes speakers from industry, field trips, career orientation workshops and discussions of ethics in the mathematical sciences. Follow-up sessions are held on four Saturdays during the school year.

## NEW YORK

**City College of the City University of New York**
*The Young Scholars Discovery Program*

**Award Number:** 9553493
**Project Location:** New York, NY
**Project Type:** Commuter
**Recruitment Area:** New York City
**Application Deadline:** 5/29/97
**Enrollment:** 104
**Eligibility/Qualifiers:** Entering Grade 9 or 11
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Environmental Science; Microbiology
**Contact:** Martin Marin
Department of Science Education
School of Education
Convent Avenue & 138th St.
New York, NY 10031
Phone: (212) 650-6220
E-Mail: mmarin@scisum.ccny.cuny.edu
Fax: (212) 650-6221

**Description:**

This program is for 104 female and underrepresented science students, 54 of whom will be preparing to enter the ninth grade and 50 of whom will be recruited from the "rising junior" class within the high school. The disciplinary focus will be on environmental science and microbiology respectively. Each six week program will be followed-up during the academic year.

**City College of the City University of New York**

*Young Scholars Program for Molecular Biology and Related Areas*

**Award Number:** 9553494
**Project Location:** New York, NY
**Project Type:** Commuter
**Dates:** 6/29/97-8/24/97; Academic Year Follow-Up
**Recruitment Area:** New York City and Suburbs
**Application Deadline:** 5/15/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 12; 11th Grade Science and Mathematics
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Molecular Biology and Related Sciences

**Contact:** Myer Fishman or
Michael Weiner
CUNY City College
Department of Chemistry
Convent Avenue & 138th St.
New York, NY 10031
Phone: (212) 650-6601
Fax: (212( 650-7973

**Description:**

The City College of the City University of New York offers enrichment experiences in an eight-week, summer commuter Young Scholars project in chemistry and molecular biology for 30 students entering grade 12. Each student participates in a summer research team, with his/her own problem integrated into the larger disciplinary focus of the group. The research is in tandem with a strong program of discussions, seminars, and techniques in scientific writing and oral communication which are covered in a series of sessions led by the program staff and other City College faculty.

**Mercy College**

*Mathematical Modeling at Mercy College (M3C)*

**Award Number:** 9553532
**Project Location:** Dobbs Ferry, NY
**Project Type:** Commuter
**Dates:** 7/7/97-8/8/97
**Recruitment Area:** Westchester County and Surrounding Counties
**Application Deadline:** 5/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Completion of Sequential Mathematics II; Grade B or Above; Interest in Mathematics; Teacher Recommendation
**Cost:** None
**Stipends:** $50 per Week
**Discipline Focus:** Mathematics

**Contact:** Nagaraj Rao
Mercy College
Dept. of Mathematics
& Comp. Info. Sci.
555 Broadway
Dobbs Ferry, NY 10522
Phone: (914) 674-7593
E-Mail: nsrao@aurora.liunet.edu
Fax: (914) 674-7518

**Description:**

This five-week project focuses on mathematics with an emphasis on students creating mathematical models useful in solving problems in the physical, natural, and environmental sciences. The students take part in field trips to area research centers so that they may interact with scientists using mathematical modeling, and also may become familiar with a variety of careers. Follow-up sessions occur during the academic year.

**Roswell Park Cancer Institute**
*Young Scholars - Summer Research Participation Program*

**Award Number:** 9552915
**Project Location:** Buffalo, NY
**Project Type:** Commuter and Residential
**Dates:** 6/23/97-8/15/97
**Recruitment Area:** National
**Application Deadline:** 3/1/97
**Enrollment:** 15
**Eligibility/Qualifiers:** Entering Grade 12; Science and Mathematics Background
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Biological; Biochemical; and Biophysical Sciences

**Contact:** Dr. Edwin A. Mirand
Roswell Park Cancer Institute
Elm & Carlton Streets
Buffalo, NY 14263-0001
Phone: (716) 845-2339
E-Mail: cjohnson@sc3102.med.buffalo.edu
Fax: (716) 845-8178

**Description:**

This program encompasses both research (90%) and didactic (10%) experiences for high ability, high potential students from across the country. Special efforts are made to recruit ethnic minorities and women. A minimum of 6 positions will be reserved for minorities. The goal is to nurture students' interest in science through a variety of mechanisms and to help them in planning for college and a career in science. This is achieved by involving students in an atmosphere of intensive research and by having them live in a community of scholars. Participants work on an independent research project under the direct supervision of senior scientists and spend 10% of their time attending lectures and seminars. Student projects are developed in collaboration with an assigned senior scientist who serves as a personal mentor. At the conclusion of the program, all students participate in a scientific conference that includes both poster and oral presentations.

**State University of New York - Oswego**
*Explorations in Mathematics and Physics*

**Award Number:** 9552909
**Project Location:** Oswego, NY
**Project Type:** Residential
**Dates:** 7/7/97-8/1/97
**Recruitment Area:** Syracuse and Surrounding Rural Areas
**Application Deadline:** 5/16/97
**Enrollment:** 35
**Eligibility/Qualifiers:** Entering Grade 8; Showing Promise in Mathematics and Science
**Cost:** None
**Stipends:** $100
**Discipline Focus:** Mathematics; Physics

**Contact:** Jack Y. Narayan
Department of Mathematics
SUNY Oswego
Oswego, NY 13126
Phone: (315) 341-2890
E-Mail:
narayan@oswego.oswego.edu
Fax: (315) 341-3177

**Description:**

SUNY College at Oswego offers a four-week summer residential project with a disciplinary focus in mathematics and physics. The project challenges students to develop new ways of thinking about mathematics and physics. Exploratory sessions, workshops, and hands-on activities focus on such topics as: graph theory and its applications, Geometer's Sketch Pad, mathematical patterns in number theory, elementary mechanics, and the physics of light. All students work on group and individual projects with the help of the mathematics and physics instructors. Follow-up activities include four Saturday workshops and conferences.

**Syracuse University**
*Mathematics/Science Young Scholars Program*

**Award Number:** 9554451
**Project Location:** Syracuse, NY
**Project Type:** Semi-Residential
**Recruitment Area:** Central / Upstate NY
**Application Deadline:** 5/31/97
**Enrollment:** 40 - 50
**Eligibility/Qualifiers:** Entering Grade 8
**Cost:** None
**Stipends:** None
**Discipline Focus:** Mathematics; Science; Technology

**Contact:** Howard Johnson
Syracuse University
Academic Affairs
303 Bowne Hall
Syracuse, NY 13244-1200
Phone: (315) 443-2373
E-Mail: hjohnson@syr.edu
Fax: (315) 443-3423

**Description:**

This is a four week, residential, intensive summer program designed to encourage bright young minority students and young women to continue studying mathematics, science, and computer technology in high school. Participants will live and eat on the main campus at Syracuse University from Sunday evening through Friday afternoon. Friday night they are sent home for the weekend. During the time participants are on campus, educators from the mathematics, science, and computer technology areas work continuously with the students to provide a challenging academic experience that will supplement the regular school year program. The goal is to give all of these students the opportunity to strengthen their skills in mathematics, science, and computer technology, an opportunity they may otherwise not receive. Preference is given to underrepresented and female students.

**University of Rochester**
*Young Women Scholars in Physics*

**Award Number:** 9552899
**Project Location:** Rochester, NY
**Project Type:** Commuter
**Recruitment Area:** Greater Rochester
**Application Deadline:** 3/7/97
**Enrollment:** 24
**Eligibility/Qualifiers:** Entering Grade 10 or 11
**Cost:** None
**Stipends:** None
**Discipline Focus:** Physics

**Contact:** Priscilla Auchincloss or
Connie Jones
Department of Physics and Astronomy
University of Rochester
Rochester, NY 14627
Phone: (716) 275-9344 / 5306
E-Mail: psa@urhep.pas.rochester.edu
connie@urhep.pas.rochester.edu
Fax: (716) 275-8527

**Description:**

Five-week, full day summer program including: laboratory-centered, inquiry-based introduction to physics concepts and methods; research projects using forefront optical fiber and laser technologies; small group engineering projects; field trips to local laboratories; and meetings with women researchers in a variety of fields incorporating physics. Follow-up academic year program includes monthly workshops on innovative scientific research projects and the University of Rochester.

## OHIO

**Ohio State University ATI**
*Young Investigators Summer Institute on Science and Agriculture*

**Award Number:** 9552897
**Project Location:** Wooster, OH
**Project Type:** Residential
**Dates:** 6/22/97-7/19/97
**Recruitment Area:** Northeastern OH
**Application Deadline:** 2/28/97 (Postmark)
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 8 or 9; Complete two of Earth, Physical, or Life Science
**Cost:** None
**Stipends:** None
**Discipline Focus:** Agricultural Science
**Contact:** Clyde Opliger
Ohio State University / ATI
1328 Dover Road
Wooster, OH 44691
Phone: (310) 264-3911x 1266 or 1299
E-Mail: opliger.2@osu.edu
Fax: (330) 262-7634

**Description:**

Activities of this four-week project include enrichment activities focusing on the potential of agricultural careers; opportunities to participate in laboratory and field experiences with practicing scientists; a conference where students present their finding and discuss implications of the project; career exploration activities, and a follow-up project involving the Young Scholar's sponsoring science teacher and class.

**University of Toledo**
*UT Chemical Engineering Summer Workshop*

**Award Number:** 9553515
**Project Location:** Toledo, OH
**Project Type:** Residential
**Dates:** 7/7/97-7/26/97
**Recruitment Area:** Regional; National
**Application Deadline:** 3/31/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 10 or 11; One Year Science; Two Years Mathematics
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Chemical Engineering
**Contact:** Steven LeBlanc
University of Toledo
Chemical Engineering Dept.
2801 Bancroft St.
Toledo, OH 43606
Phone: (419) 537-2142
E-Mail: leblanc@uofto2.utoledo.edu

**Description:**

This three-week project in chemical engineering is designed to introduce high school students to career opportunities available to them in engineering. The workshop involves a variety of experiences including laboratory experimentation, hands-on computer instruction, independent group investigations and field trips.

## OREGON

**Oregon Graduate Institute: Saturday Academy**
*Contemporary Applied Mathematics, 1996-1997*

**Award Number:** 9552937
**Project Location:** Portland, OR
**Project Type:** Commuter
**Recruitment Area:** Metro Portland
**Application Deadline:** 5/1/97
**Enrollment:** 33 Students; 13 Teaching Assistants
**Eligibility/Qualifiers:** Entering Grade 9 or 10; Working at Grade Level; Excelling or with Potential to Excel in Mathematics; Recommendation; Phone Interview
**Cost:** $20 (May be waived)
**Stipends:** None
**Discipline Focus:** Mathematics
**Contact:** Gail Whitney
Saturday Academy, OGI
P.O. Box 91000
Portland, OR 97291-1000
Phone: (503) 690-1186
E-Mail: gwhitney@admin.ogi.edu
Fax: (503) 690-1470

**Description:**

Project activities include: Engaging students in applying research methods and problem solving strategies to a selection of real, data-rich, open-ended case studies based on the work of community mentors and relevant to student interests; visits with scientists and engineers who use mathematics in their work, using hands-on activities to illustrate math applications in the workplace; developing a network of peers and adults who support academic achievement and the pursuit of science, math, and technology-based careers. Participants in previous summer institutes assist new students with team problem solving and tutoring. This network is sustained through academic year workshops, monthly staff contact, math tutoring if needed, field trips, and career presentations. Preference is given to African American students.

## PENNSYLVANIA

**College of Misericordia**
*Explorations in Mathematics and Biology (EMB)*

**Award Number:** 9553537
**Project Location:** Dallas, PA
**Project Type:** Residential
**Dates:** 7/6/97-8/2/97
**Recruitment Area:** PA, NJ, NY
**Application Deadline:** 4/18/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 10 or 11
**Cost:** None
**Stipends:** $100
**Discipline Focus:** Mathematics; Biology
**Contact:** Mazen Shahin
College of Misericordia
Dallas, PA 18612
Phone: (717) 674-6452
E-Mail: yspemb@miseri.edu
Fax: (717) 674-2441

**Description:**

The disciplinary foci of this four-week project are in biology and mathematics, emphasizing the use of difference equations and matrices to analyze biological relationships in animal physiology and homeostasis. The participants work in small groups and use computers extensively to explore and discover mathematical and biological concepts, which are further emphasized in hands-on experiences in the laboratory. Students interact with scientists, teachers, career professionals, and college students. They also develop research projects to be implemented in the following academic year.

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**Temple University**
*Mathematics Academy for Inner-City Scholars at Temple (MAST)*

**Award Number:** 9552931
**Project Location:** Philadelphia, PA
**Project Type:** Commuter
**Dates:** 7/7/97-8/1/97
**Recruitment Area:** Inner City Philadelphia
**Application Deadline:** 4/30/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 9; High Potential Student
**Cost:** None
**Stipends:** $40 per Week; Transportation; Lunch
**Discipline Focus:** Discrete Mathematics
**Contact:** John Schiller
Department of Mathematics
Temple University
Philadelphia, PA 19122
Phone: (215) 204-5012
E-Mail: schiller@euclid.math.temple.edu
Fax: (215) 204-6433

**Description:**

The disciplinary focus of this four-week project is mathematics with a particular emphasis on discrete mathematics, using computers and graphics calculators as tools in the analysis and solution of problems. The activities planned include individual and group work, group research projects, field trips, and interaction with student role models, mentors, and professionals in mathematics-related areas. The participants are involved in ten academic-year follow-up meetings during which they present their research and explore other problems

**University of Pennsylvania**
*Penn Summer Science Academy*

**Award Number:** 9552919
**Project Location:** Philadelphia, PA
**Project Type:** Commuter and Residential
**Dates:** 7/7/97-8/1/97
**Recruitment Area:** National
**Application Deadline:** 4/17/97
**Enrollment:** 165
**Eligibility/Qualifiers:** Entering Grade 11 or 12; High School Biology; Algebra; or Chemistry
**Cost:** $1575 Commuter; $2675 Residential
**Stipends:** Available
**Discipline Focus:** Environmental Science; Material Science; Mathematics; Molecular Biology
**Contact:** Shirley Hale
University of Pennsylvania
College of General Studies
3440 Market Street, Suite 100
Philadelphia, PA 19104-3335
Phone: (215) 573-6085
E-Mail: youthprg@sas.upenn.edu
Fax: (215) 573-2053

**Description:**

This project gives students a choice of working in Environmental Science, Material Science, Mathematics, or Molecular Biology. Students in Environmental Science perform environmental analyses of different types of ecosystems in the Delaware Valley area. Material Science students work in small groups on week-long projects in state-of-the-art facilities, supported by computer instruction on data collection and analysis, and attend a class based on a computer-assisted text developed at Penn called *The Bicycle and the Walkman*. Mathematics students explore areas of research including number theory, geometric optimization, chaos, and statistics. Molecular Biology students carry out laboratory projects guided by faculty and attend lectures on enzymes, molecular genetics, and developmental biology. All students receive Internet accounts and get training in networking and computing. Trips to research sites and outside speakers give further exposure to research careers. Students also discuss and write about ethical and social questions related to science. All students engage in follow-up activities during the academic year.

**Villanova University**
*A Young Scholars Project in Biology and Mathematics for High School Students - MSTP*

**Award Number:** 9553499
**Project Location:** Villanova, PA
**Project Type:** Residential
**Dates:** 6/22/97-8/2/97
**Recruitment Area:** Metro Corridor from NYC to DC
**Application Deadline:** 4/2/97
**Enrollment:** 40 Students; 8 Teachers
**Eligibility/Qualifiers:** Entering Grade 11 or 12; B+ Average or Strong Recommendations as Student of High Potential in Science and Mathematics
**Cost:** None
**Stipends:** $100 per Week
**Discipline Focus:** Biology; Mathematics
**Contact:** William Fleischman
Villanova University
Dept. of Computer Sciences
Villanova, PA 19085
Phone: (610) 519-6018
E-Mail: youngsch@king-kong.vill.edu
fleishma@cats.vill.edu
Fax: (610) 519-7889

**Description:**

The summer component of this project combines course work with extensive laboratory research experience. The subject matter in the two disciplines is presented in an innovative, unified manner that emphasized interdisciplinary connections, scientific inference, quantitative thinking, and techniques of visualization. Other activities include field trips and panel discussions. Academic year follow-up activities include the implementation of individual research projects designed by the students during the summer.

## PUERTO RICO

**University of the Sacred Heart**
*University of The Sacred Heart Young Scholars Program*

**Award Number:** 9553497
**Project Location:** Santurce, PR
**Project Type:** Residential
**Dates:** 6/97-7/97
**Recruitment Area:** San Juan Educational Region
**Application Deadline:** 4/1/97
**Enrollment:** 15
**Eligibility/Qualifiers:** Entering Grades 9-12; B Average; Teacher Recommendations; Essay; Interviews
**Cost:** None
**Stipends:** None
**Discipline Focus:** Interdisciplinary; Environmental Issues
**Contact:** Maria Acevedo
University of the Sacred Heart
Dept. of Natural Sciences
P.O. Box 12383 Loaiza Station
Santurce, PR 00914-0383
Phone: (809) 728-1515

**Description:**

Project focus in interdisciplinary, stressing acquisition of research skills and awareness of environmental issues. Through lectures on scientific issues and contact with specialists and academic year follow-up, participants are presented with a broad spectrum of scientific careers and encouraged to establish a career goal. Design is highly motivational, seeking to capitalize on participants' interest and high potential in science. Two thirds of students served are economically disadvantaged; preference is given to female and handicapped students.

## SOUTH CAROLINA

**Benedict College**
*Benedict Precollege Statistics Project (BP STAT): Increasing Access to Science and Mathematics*

**Award Number:** 9553502
**Project Location:** Columbia, SC
**Project Type:** Residential
**Dates:** 6/22/97-7/25/97; Academic Year Follow-Up
**Recruitment Area:** SC
**Application Deadline:** 4/18/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 10 or 11; One Year High School Algebra; 2.75 GPA or Better
**Cost:** None
**Stipends:** $100 per Week
**Discipline Focus:** Statistics; Problem Solving
**Contact:** Aliakbar Montazer-Haghig
Benedict College
Dept. of Mathematics & Computer Science
Box 203
Columbia, SC 29204
Phone: (803) 253-5287
E-Mail: amhaghighi@aol.com
Fax: (803) 253-5064

**Description:**

Participants will become familiar with the mathematics, probability, and statistics needed for research and problem solving in environmental health science, quality control, and experimental design and modeling. They will learn to utilize statistics software MINITAB, MATLAB, and Microsoft Word and Excel. Participants will use HP graphing calculators and also will learn about careers requiring statistics.

**Furman University**
*Young Scholars in Computing*

**Award Number:** 9553522
**Project Location:** Greenville, SC
**Project Type:** Residential
**Recruitment Area:** GA, NC, SC, TN
**Application Deadline:** 4/15/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 11 or 12
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Computer Science
**Contact:** Kenneth Abernethy
Furman University
Department of Computer Science
Greenville, SC 29613
Phone: (864) 294-2097
E-Mail: aberneth@furman.edu
Fax: (864) 294-3229

**Description:**

This program explores research topics in the science of computing. Participants will conduct team research projects chosen from one of the following areas: image processing, neural networks, data visualization, and networking.

## TENNESSEE

**Rhodes College**
*The Nature of Biology*

**Award Number:** 9552894
**Project Location:** Memphis, TN
**Project Type:** Commuter
**Recruitment Area:** TN, AR, MS
**Application Deadline:** 5/9/97
**Enrollment:** 32
**Eligibility/Qualifiers:** Entering Grades 10-12
**Cost:** None
**Stipends:** $400 for Qualifiers
**Discipline Focus:** Biology
**Contact:** John Olsen
Rhodes College
Department of Biology
2000 North Parkway
Memphis, TN 38112-1690
Phone: (901) 726-3558
E-Mail: Olsen@Rhodes.edu
Fax: (901) 726-3565

**Description:**

*The Nature of Biology* project will provide students with the opportunity to learn four techniques for investigation scientific problems in biology, and then students (in lab groups of 2) will individually design, conduct, analyze, summarize, and present their research in the form of posters and presentations to their peers at weekly participant scientific meetings. The philosophical and sociological implications of science in general, and more specifically research in biology, will be presented to students as continuous and interwoven components of their research project. Panels of professionals will introduce the participants to a wide variety of careers in biology. Information on applying to college and financial resources available to first year students will also be made available to participants. The program will be followed up by assessing if students completing the program have: a better sense of how scientists conduct and report research; increased self-confidence in their ability to engage in these types of activities; improved writing skills; and a better understanding of the role science plays in society.

**University of Tennessee Memphis**
*Young Memphis Scholars*

**Award Number:** 9552918
**Project Location:** Memphis, TN
**Project Type:** Commuter
**Dates:** 6/97-8/97
**Recruitment Area:** Memphis, TN;
West Memphis, AR;
Northern MS
**Application Deadline:** 3/31/97
**Enrollment:** 35
**Eligibility/Qualifiers:** Entering Grade 10 or 11;
GPA 3.5 or Higher;
Interest in Science;
Leadership Abilities
**Cost:** None
**Stipends:** $100 per Week
**Discipline Focus:** Mathematics; Physics;
Computer; Life Sciences
**Contact:** Gabor J. Tigyi
Physiology & Biophysics
University of Tennessee
894 Union Avenue
Memphis, TN 38163
Phone: (901) 448-7110
E-Mail: gtigyi@physiol.utmem.edu
Fax: (901) 448-7126

**Description:**

The disciplinary focus of this eight-week program is biomedical science with additional emphasis on mathematics and cell biology. Each student works in the laboratory with a University of Tennessee, Memphis faculty member to develop research skills and conduct a research project. Academic coursework, career counseling, and a study of science ethics are included in the project. Students present their research in a poster session/science fair at the conclusion of the program.

## TEXAS

**Southwest Texas State University**
*SWT Honors Summer Institute with MSTP Component*

**Award Number:** 9553510
**Project Location:** San Marcos, TX
**Project Type:** Residential
**Dates:** 6/8/97-7/19/97
**Recruitment Area:** National
**Application Deadline:** 4/30/97
**Enrollment:** 32 1st Year Students; 8 2nd Year Students; 8 Teachers
**Eligibility/Qualifiers:** Entering Grades 10-12; Application Form; Teacher Recommendation; High School Transcript
**Cost:** $200 (may be waived)
**Stipends:** $10 per Week
**Discipline Focus:** Mathematics
**Contact:** Max Warshauer
Department of Mathematics
Southwest Texas State University
San Marcos, TX 78666
Phone: (512) 245-3439
E-Mail: MW07@academia.swt.edu
Fax: (512) 245-3847

**Description:**

The goal of this project is to excite academically talented students about doing mathematics, to teach the students to reason rigorously and precisely, and to develop questioning minds. This is a cooperative program in which the students work together exploring new ideas and sharing in the excitement of finding the simple mathematical ideas which underlie and explain seemingly complex problems. Introductory courses are offered in elementary Number Theory, *Mathematica* Computer Programming, and Discrete Mathematics. An Honors Seminar discusses ethics in science, colleges, and career opportunities. Returning students and more advanced first year participants study Abstract algebra and Analysis. Extracurricular activities include weekly seminars by guest speakers, picnics, and weekend excursions which give the participants a chance to relax and enjoy the local surroundings. Students are provided with a copy of *Mathematica* and a modem, and work on a school year research project at their home high school jointly supervised by a faculty mentor from SWT and their high school teacher.

**Texas A&M University Research Foundation**
*An Engineering Awareness Program in Offshore Technology for High Potential High School Students*

**Award Number:** 9552908
**Project Location:** College Station, TX
**Project Type:** Commuter
**Recruitment Area:** Bryan/College Station and Surrounding Area
**Application Deadline:** 3/31/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 11 or 12; High GPA; Teacher Recommendation
**Cost:** None
**Stipends:** $400
**Discipline Focus:** Engineering
**Contact:** Leroy S. "Skip" Fletcher
Mechanical Engineering
Texas A&M University
Co. Station, TX 77843-3123
Phone: (409) 845-7270
E-Mail: sfletcher@mengr.tamu.edu
Fax: (409) 845-3081

**Description:**

Participants in this program are at least 50% minority or female with the intent of increasing enrollment of minority and female undergraduates in the College of Engineering. The program involves a combination of lectures, discussions, seminars, field trips, laboratory tours, and both team and individual projects related to ocean engineering and offshore technology. The program includes an emphasis on creativity, scientific inquiry, ethics and professional responsibility, and the development of communication skills, in addition to career orientation.

**University of Texas Medical Branch**
*UTMB's Summer Research Program for High School Students*

**Award Number:** 9552926
**Project Location:** Galveston, TX
**Project Type:** Commuter and Residential
**Dates:** 6/10/97-8/2/97
**Recruitment Area:** National
**Application Deadline:** 4/5/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 11 or 12
**Cost:** None
**Stipends:** Available
**Discipline Focus:** Biochemistry; Life Sciences; Computer Science; Social Science

**Contact:** Clifford Houston
Office of Multicultural Affairs
University of Texas Medical Branch at Galveston
Galveston, TX 77555-0636
Phone: (409) 772-4777
E-Mail: chouston@mspo4.med.utmb.edu
Fax: (409) 772-9598

**Description:**

the University of Texas Medical Branch provides a research experience of eight weeks duration at UTMB for 20 students each year who are entering either the 11th or 12th grade and are interested in science. Participants engage in active research in the laboratories of mentors and are required to participate in academic year follow-up activities including a class report and a research or teaching project related to their summer research.

## VIRGINIA

**Ferrum College**
*Science Adventure in Research and Career Exploration*

**Award Number:** 9553530
**Project Location:** Ferrum, VA
**Project Type:** Residential
**Recruitment Area:** SW Virginia
**Application Deadline:** 4/1/97
**Enrollment:** 30 8th Graders; 3 9th Graders
**Eligibility/Qualifiers:** Entering Grade 8 or 9; Potential and Interest in Science
**Cost:** None
**Stipends:** None
**Discipline Focus:** Aquatic Ecology; Science Careers

**Contact:** Carolyn Thomas
Ferrum College
Department of Biology
Division of Life Sciences
Ferrum, VA 24088
Phone: (540) 365-4368
E-Mail: cthomas@panther.ferrum.edu
Fax: (540) 365-4375

**Description:**

An ecological study of leaf decomposition in a mountain stream is performed by the students. Science Career exploration is an equally important component with a variety of science professions being explored by the students through the help of guest scientists and camp staff. Two field trips a year to university research science labs are also planned for participants.

**Hampton University**
*Young Scholars Early Alert Initiative in Mathematics and Physics*

**Award Number:** 9552917
**Project Location:** Hampton, VA
**Project Type:** Residential
**Recruitment Area:** Tidewater VA
**Application Deadline:** 3/28/97
**Enrollment:** 24
**Eligibility/Qualifiers:** Entering Grade 7; Gifted
**Cost:** None
**Stipends:** None
**Discipline Focus:** Mathematics; Physics
**Contact:** Dianne Q. Robinson
Hampton University
Interdisciplinary Science Center
Hampton, VA 23668
Phone: (757) 727-5869
E-Mail: drobinso@infi.net
Fax: (757) 727-5832

**Description:**

The three week residential program will focus on mathematics and physics enrichment activities including computer simulations, use of the Internet, developing a Web page, experimentation, using the TI-83 graphing calculator, and conducting a research project. University laboratory facilities will be the program site where guided mentorship will be a part of the student's summer experience. Field trip activities will provide application of principles learned in the program.

**Virginia Commonwealth University**
*Richmond Area Young Scholars Program*

**Award Number:** 9552924
**Project Location:** Richmond, VA
**Project Type:** Commuter
**Dates:** 6/23/97-7/11/97
**Recruitment Area:** Richmond and Counties Involved in Mathematics and Science Center Consortium
**Application Deadline:** 4/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 7
**Cost:** None
**Stipends:** $20 and $22.50; Travel Allowance
**Discipline Focus:** Mathematics; Physics
**Contact:** Reuben Farley and Henry Johnson
Mathematical Sciences
Virginia Commonwealth University
1015 W. Main Street
Richmond, VA 23284-2014
Phone: (804) 828-1301 x 121 or 127
E-Mail: rfarley@atlas.vcu.edu
Fax: (804) 828-8785

**Description:**

The disciplinary focus of this three-week project is mathematics and physics. Honors topics instruction is provided by university faculty and by pre-college faculty who are members of the Mathematics Teacher Professional network. Student interest in mathematics and science is nurtured as students report on small group interactions with industry and academic researchers. Students conduct and report on small scale research projects. Academic year follow-up includes regular contact with mentors and group activities through the Richmond Area Mathematics and Science Center.

## WASHINGTON

**Seattle University**
*Wind, Water and Waves: Interactive Science Education*

**Award Number:** 9552914
**Project Location:** Seattle, WA
**Project Type:** Commuter and Residential
**Recruitment Area:** Seattle
**Application Deadline:** 4/1/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Evidence of Strong Mathematics and Science Potential
**Cost:** None
**Stipends:** $100
**Discipline Focus:** Mathematics; Physics

**Contact:** Kathleen Sullivan
Seattle University
Department of Mathematics
Broadway & Madison
Seattle, WA 98122
Phone: (206) 296-5931
E-Mail: ksulliva@seattleu.edu
Fax: (206) 296-2179

**Description:**

The Young Scholars spend three weeks in August at Seattle University, carrying out experiments related to pressure, force, and wave behavior. These studies are continued for a fourth week in a residential lakeside camp. During the academic year, small teams consisting of Young Scholars, a professional mentor, and a Seattle University mentor work on science projects related to their summer investigations. These research projects are presented at a science fair in April. Preference is given to female students.

**University of Washington**
*MESA Young Scholars Early Alert Initiative, Physics of Robotics*

**Award Number:** 9553521
**Project Location:** Seattle, WA
**Project Type:** Commuter
**Dates:** 6/30/97-7/25/97
**Recruitment Area:** Central Seattle
**Application Deadline:** 4/30/97
**Enrollment:** 40
**Eligibility/Qualifiers:** Entering Grade 8 or 9; Mathematics or Science Potential
**Cost:** None
**Stipends:** None
**Discipline Focus:** Engineering; Mathematics; Physics

**Contact:** Per G. Reinhall
University of Washington
Dept. of Mechanical Engineering
Seattle, WA 98195
Phone: (206) 543-5628
E-Mail: reinhall@u.washington.edu
Fax: (206) 685-8047

**Description:**

This four-week project provides the students with an opportunity to engage in classroom, laboratory, field trips, and research activities with university faculty during the summer. The importance of team work in the engineering design process is emphasized through weekly projects leading to the design and construction of a complex engineering system involving robotics. The students are also engaged in computer activities and are invited back to campus for monthly follow-up activities during the academic year.

## WEST VIRGINIA

**Fairmont State College**
*Action Math and Physics Laboratory Experiences (AMPLE): An Enrichment Program to Develop Young Scholars in West Virginia*

**Award Number:** 9552913
**Project Location:** Fairmont, WV
**Project Type:** Commuter
**Recruitment Area:** Marion County and Three Adjacent Counties
**Application Deadline:** 4/15/97
**Enrollment:** 36
**Eligibility/Qualifiers:** Entering Grade 7 or 8; Above Average Ability
**Cost:** None
**Stipends:** None
**Discipline Focus:** Physics; Mathematics
**Contact:** Elizabeth Frye
Fairmont State College
Department of Mathematics
1201 Locust Ave.
Fairmont, WV 26554-2489
Phone: (304) 367-4621
E-Mail: ewfrye@fsc.vex.wunet.edu
Fax: (304) 367-4589

**Description:**

A three-week summer physics, mathematics, computer science, and research program followed by year-long, after-school and Saturday mentorships, field trips, and research development. Career exploration and parental sessions included. Preference is given to underrepresented students.

**Marine Science Consortium**
*Young Scholars Program in Marine Science for Deaf and Hard of Hearing Youth*

**Award Number:** 9552928
**Project Location:** Wallops Island, VA
**Project Type:** Residential
**Dates:** 6/29/97-7/26/97
**Recruitment Area:** National
**Application Deadline:** 5/1/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Recommendation by Principal or Science Teacher
**Cost:** None
**Stipends:** None
**Discipline Focus:** Marine Science
**Contact:** Joseph Andrew Marshall
Department of Biology
P.O. Box 6057
West Virginia University
Morgantown, WV 26506-6057
Phone: (304) 293-5201 x 2528
E-Mail: jmar@wvnvm.wvnet.edu
Fax: (304) 293-6363

**Description:**

Introduction to the field of Marine Science and Oceanography through lectures, laboratories, field trips, as well as team and independent research projects with the goal of stimulating interest in science as a career. Preference is given to deaf and hard-of-hearing students.

## WISCONSIN

### St. Norbert College

*Mathematics Achievement and Performance in Science (MAPS) for Young Scholars*

**Award Number:** 9553517
**Project Location:** De Pere, WI
**Project Type:** Residential
**Dates:** 6/14/97-6/29/97
**Recruitment Area:** National
**Application Deadline:** 3/18/97
**Enrollment:** 30
**Eligibility/Qualifiers:** Entering Grade 8
**Cost:** None
**Stipends:** None
**Discipline Focus:** Mathematics

**Contact:** Bonnie Berken
St. Norbert College
100 Grant Street
De Pere, WI 54115
Phone: (414) 337-3191
E-Mail: berkba@sncac.snc.edu
Fax: (414) 403-4098

**Description:**

The focus of this three-week project is a thematic one, Mother Earth, integrating mathematics and science. The students take part in activities that call for them to conduct experiments, make measurements, analyze data, and work with computers. Working with college faculty, local school educators, and Native-American mathematicians and scientists as role models, these young men and women have the opportunity to build a solid foundation for lifelong interest in mathematics and science. Preference is given to Native American students.

### University of Wisconsin Superior

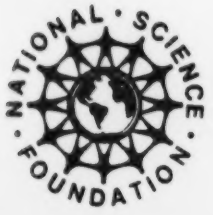
*Modeling Acid and Mercury Deposition: An Introduction to Scientific Methods*

**Award Number:** 9553506
**Project Location:** Superior, WI
**Project Type:** Summer Residential
**Dates:** 6/16/97-7/18/97
**Recruitment Area:** Regional and National
**Application Deadline:** 4/14/97
**Enrollment:** 20
**Eligibility/Qualifiers:** Entering Grade 11 or 12; One year Biology; Algebra I and II; Geometry
**Cost:** $30 Activities Fee and Some Meals on Weekends
**Stipends:** $100 Travel Assistance and Additional Stipend Available
**Discipline Focus:** Mathematics; Chemistry; Biology

**Contact:** Francis G. Florey
Dept. of Mathematics and Computer Science
University of Wisconsin - Superior
1800 Grand Avenue
Superior, WI 54880-2898
Phone: (715) 394-8289
E-Mail: fflory@staff.uwsuper.edu
Fax: (715) 394-8454

**Description:**

The University of Wisconsin-Superior will initiate a five-week Young Scholars project for 20 students entering grades eleven and twelve. The disciplinary foci of the program are mathematics, chemistry, and biology with emphasis on the deposition of acid rain and mercury. Students use exploratory data analysis and multiple linear regression to develop mathematical models of acid rain pH. Students are introduced to ethical issues and career possibilities, as well as developing a follow-up research project.

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